

DISHWASHER SILVERWARE BASKET WITH SWIVEL HANDLE

BACKGROUND OF THE INVENTION

This invention relates generally to basket assemblies, and, more particularly, to silverware basket assemblies for use in automatic washing machines.

Conventional dishwashing machines include a washing chamber in which upper and lower dishware racks are slidably mounted. Each rack is typically supported on side walls of the dishwasher and includes rollers for sliding movement between an extended position wherein the rack is substantially outside of the washing chamber and a retracted position wherein the rack is substantially inside the washing chamber. As dishware items are loaded and unloaded, the racks are moved to their extended positions for substantially unobstructed loading of items. The racks are lattice structures adapted for holding dishes, plates, cups, pots, pans and other dishware, cookware, and food storage containers while permitting water spray action for cleaning items in the racks. As at least some items, such as silverware, flatware, and cooking utensils, are too small for the racks to accommodate, a silverware basket containing one or more compartments is typically attached to one of the racks to hold smaller items within the washing chamber.

It is convenient for users to remove the silverware basket from a rack to load and unload silverware and smaller items to and from the dishwasher. Thus, at least one type of known silverware basket includes a handle to facilitate lifting of the silverware basket from the dishwasher rack and carrying the basket, for example, to a sink where items may be loaded into the basket, or to a drawer where items may be unloaded from the basket. However, known silverware basket handles tend to obstruct the basket during loading and unloading of silverware and small items. Loading and unloading silverware and smaller items in a restricted clearance around the handles is awkward and frustrating.

Accordingly, it would be desirable to provide a silverware basket assembly with a study handle that facilitates transport of the basket while allowing unobstructed loading and unloading of the basket.

BRIEF SUMMARY OF THE INVENTION

In an exemplary embodiment of the invention, a silverware basket assembly for a dishwashing machine includes a basket defining at least one compartment for receiving silverware, and a handle attached to the basket that is selectively positionable between a first position and a second position. In the first position, the handle is directly overhead the basket compartment for ease of carrying the basket, and in the second position the handle is pivoted relative to the basket to a sideward position allowing substantially unobstructed access to the silverware basket compartment.

More specifically, the basket comprises at least one handle bracket for attaching the handle, and the handle is configured for engaging the handle bracket and maintaining the handle in either the first position or the second position. The bracket includes a crown surface, and the handle includes a peg for insertion into the crown surface. The peg and crown have substantially complementary outer surfaces, except that the crown includes first and second detents that engage a projection on the peg outer surface to engage the handle peg and the crown into one of the first or second positions. The detents in the handle bracket crown prevent unintentional movement of the handle between the first and second positions, and provide a sturdy feel to the user in either position. The handle extends substantially parallel to a longitudinal axis of the basket, and includes contoured finger grips for easy gripping and handling by a user.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective view of a silverware basket assembly including a handle;

Figure 2 is a front elevational view of the handle shown in Figure 1;

Figure 3 is a side elevational view of the handle shown in Figure 1;

Figure 4 is a cross sectional view of the handle shown in Figure 1 along line 4-4 of Figure 2;

Figure 5 is a perspective view of a portion of the basket assembly shown in Figure 1;

Figure 6 is a side elevational view of the basket shown in Figure 5;

Figure 7 is an enlarged view of a portion of Figure 6; and

Figure 8 is a perspective view of a portion of the assembly shown in Figure 1 with the handle shown in different positions.

DETAILED DESCRIPTION OF THE INVENTION

5 Figure 1 is a perspective view of an exemplary silverware basket assembly 10 including a middle basket 12, two side baskets 14 located on either side of middle basket 12 and a contoured handle 16 extending a length of middle basket 12 for carrying basket assembly 10. Each of middle basket 12 and side baskets 14 includes a plurality of compartments 18 formed by dividers 20 for placement of
10 silverware, flatware, utensils and other known dishwasher items that are too small to be accommodated by conventional dishwasher racks. Each of baskets 12, 14 is fabricated from materials and techniques known in the art to form a lattice structure or framework therein that permits water spray action cleaning of items in baskets 10, 12, respectively. Side baskets 14 include lids 22 to ensure that lightweight items are
15 maintained within side baskets 14 during operation of a dishwasher (not shown) when lids 22 are closed. Side baskets 14 on either side of middle basket 12 together facilitate a balancing of a load with respect to handle 16, but it is contemplated that the benefits of the invention accrue to basket assemblies having more or less than two side baskets 14, as well as to single basket assemblies including only one basket, such
20 as middle basket 12.

 Figure 2 is a front elevational view of handle 16 including a gripper portion 30 extending between two attachment portions 32 depending from gripper portion 30. Gripper portion 30 includes a plurality of contoured finger grips 34 approximately centered therein and is slightly bowed outwardly. Attachment portions
25 32 extend substantially perpendicular from gripper portion 30 at either end of gripper portion 30, and include outwardly extending pegs 38 located a distance D_1 above an end 40 of attachment portions 32.

 Figure 3 is a side elevational view of handle 16 including contoured U-shape or channel shaped gripper portion 30 extending above attachment portion 32. U-shaped or channel-shaped contour of handle 16 extends partially from gripper
30 portion 30 to attachment portion end 40, and transitions to a flat rectangular section 50

for a remainder of attachment portion 32. Peg 38 extends distance D_1 above attachment portion end 40 and includes a substantially flat lower surface 52 substantially parallel to attachment portion end 40 and a contoured upper surface 54 extending therefrom.

5 Figure 4 is a cross sectional view of handle peg 38 illustrating substantially circular upper surface 54 including a projection 60 approximately centered therein. Projection 60 has a rounded surface 62 extending above peg upper surface 54 to facilitate positioning of handle 16 (shown in Figures 1-3) relative to basket assembly 10 (shown in Figure 1), as further described below.

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AI Figure 5 is a perspective view of middle basket 12 (also shown in Figure 1) including a front wall 70, a back wall 72, and opposite side walls 74 joined to one another with rounded corners 76. Back wall 72 is substantially parallel to front wall 70 and to a longitudinal axis 78 and includes an attachment member 80 for attachment to a dishwasher rack (not shown). Side walls 74 are substantially parallel to one another, substantially perpendicular to front and back walls 70, 72, and extend a shorter length than front and back walls 70, 72. Thus, middle basket 12 is substantially rectangular and defines a compartment 82 subdivided by dividers 20. Each side wall 74 contains a plurality of attachment fingers 84 including flat portion 86 and round portions 88 for detachable engagement with apertures or slots (not shown in Figure 5) of side baskets 14 (shown in Figure 1). Side walls 74 also include a handle bracket 90 approximately centered on an upper rim 92 of side walls 74.

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25 Figure 6 is a side elevational view of middle basket 12 illustrating attachment member 80 depending outwardly and downwardly from basket top edge 100 and back wall 72 for detachable engagement with a dishwasher rack (not shown). Handle bracket 90 depends downwardly from side wall upper rim 92 above attachment fingers 84. Handle bracket 90 includes a substantially flat outer surface 102 and an inner crown surface 104.

30 Figure 7 is an enlarged view of attachment bracket 90 including curved inner crown surface 104 and a first detent 106 approximately centered therein. A second detent 108 and a third detent 110 are slightly offset from and laterally flank first detent 106. Crown surface 104 is substantially circular between detents 106, 108, 110 and lower gripping teeth 112 of a different curvature than crown surface 104. In operation, handle pegs 38 (shown in Figures 2-4) are inserted into handle bracket crown surfaces 104 for snap-fit engagement with attachment bracket gripping teeth

112. Peg upper surface projection 60 (shown in Figure 4) is engaged with one of detents 106, 108, 110, such as first detent 108. Because peg upper surface 54 and crown surface 104 are generally complementary to one another, peg 38 may be rotated relative to crown surface 104 by rotation of handle 16 about middle brackets 90, thereby moving peg projection between detents 106, 108, 110. It is contemplated that other shapes and combinations of peg outer surface shapes, peg projection shapes, and detent shapes could be used in alternative embodiments within the scope of the invention.

Figure 8 is a perspective view of a portion of basket assembly 10 (shown in Figure 1) with handle 16 illustrated in a first position in solid lines, and in a second position in phantom lines. When in the first position, peg projection 60 (shown in Figure 4) is engaged with crown surface first detent 106 (shown in Figure 7) and handle 16 is approximately centered with respect to basket compartment 82 along longitudinal axis 78 for easy lifting by a user with one hand about handle gripper portion finger grips 34. In the second position, peg projection 60 (shown in Figure 4) is engaged with crown surface second or third detent, 108, 110, respectively, so that handle 16 is pivoted about handle brackets 90 and handle gripper portion 30 is generally positioned laterally of middle basket longitudinal axis 78 toward basket front and back walls 70, 72, respectively. Thus the second position allows substantially unobstructed access to basket compartment 82. Second and third crown surface detents 108, 110 allow "left" and "right" second positions so that middle basket 12 may be mounted to a dishwasher rack (not shown) using attachment member 80 to accommodate left and right handed users of dishwashers.

When attached to a dishwasher rack, handle 16 is placed in the second position substantially adjacent a side wall (not shown) of a washing chamber (not shown). When gripper portion 30 of handle 16 is lifted, a weight of basket assembly 10 and its contents causes handle 16 to shift to the first position. When basket assembly 10 is carried to its destination, handle 16 is manually moved to either the first or second position by the user for unobstructed unloading of basket contents.

Thus, a sturdy, easy to use silverware basket assembly 10 is provided with a handle that facilitates unobstructed loading and unloading of basket contents.

While the invention has been described in terms of various specific embodiments, those skilled in the art will recognize that the invention can be practiced with modification within the spirit and scope of the claims.